

Soil Colors

Topic: Land and Soil

Objectives: Observe the colors of soils

Grade Level: all

Time: 10 – 15 minutes

Materials: digging trowels, small plastic bags, spray misting bottles, paint sample strips in grays, tans, browns, reds and other earth tones, writing pads, pens or pencils

Vocabulary:
mineral
organic matter
particle

Location: Magnolia Hall Courtyard and various locations in Piedmont Park

Background: Soil is composed of particles of minerals and decayed organic matter more or less loosely combined together. The spaces between the particles can be filled with air and water. The soil color depends on what kinds of minerals it contains and the amount of organic matter present in it. How wet the soil is also influences its color.

Advance Preparation: none

Procedure:

1. Together with a classmate, collect a trowel and a small plastic bag from your teacher or activity leader.
2. Collect a soil sample from some place in the park. Use the trowel to dig a little soil into your plastic bag.
3. Return to your teacher and using the paint sample strips, try to match the soil color as closely as possible. Record the name of the matching paint strip color.
4. Now dampen your soil sample with a light spray from a misting bottle. Do not saturate the soil sample. Again, try to match your dampened soil color to one of the paint sample colors. Record this paint color name.

Questions to think about and discuss:

1. What are the names of your dry and wet soil sample colors? Do you think these are appropriate names? Can you think of other names for the soil colors?
2. Compare the paint color strips of your dry and wet soil samples. How did the color of your soil sample change when it was dampened?
3. Look at the matching paint color strips that some of your classmates found to match their soil samples. Discuss some of the surprising soil colors that you and your classmates found.
4. What do you think accounts for some of the soil colors you and your classmates found? What might cause the soil to look orange or reddish in color? What might make the soil appear very dark brown or black?